

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: SCA0372A3121GAAD01

Catalog No: SCA0372A3121GAAD01

TerraMAX® Cast Iron Motor, 50 HP, 3 Ph, 50 Hz, 415 V, 1500 RPM, 225S Frame, TEFC



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**RegalRexnord**

### Nameplate Specifications

Output HP	50 Hp	Output KW	37.0 kW
Frequency	50 Hz	Voltage	415 V
Current	64.4 A	Speed	1479 rpm
Service Factor	1	Phase	3
Efficiency	92.7 %	Power Factor	0.86
Duty	S1	Insulation Class	F
Frame	225S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6313	Opp Drive End Bearing Size	6213
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE2

### Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	Rotation	Bi-Directional
Mounting	B5	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	837 mm	Frame Length	400 mm
Shaft Diameter	60 mm	Shaft Extension	140 mm
Assembly/Box Mounting	TOP		
Outline Drawing	0222500897	Connection Drawing	8442000085

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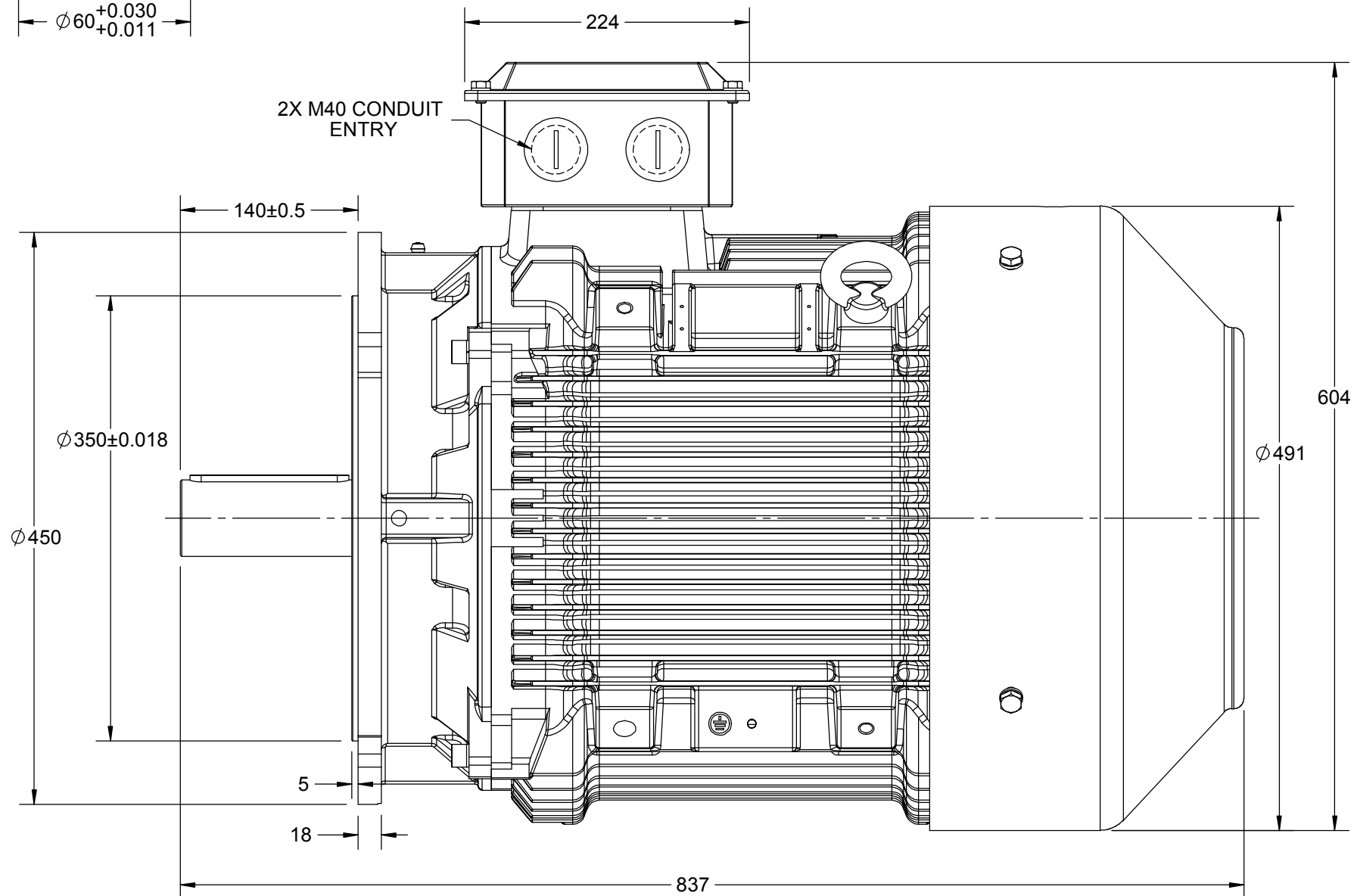
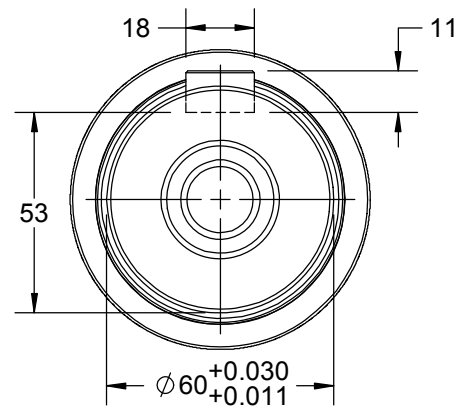
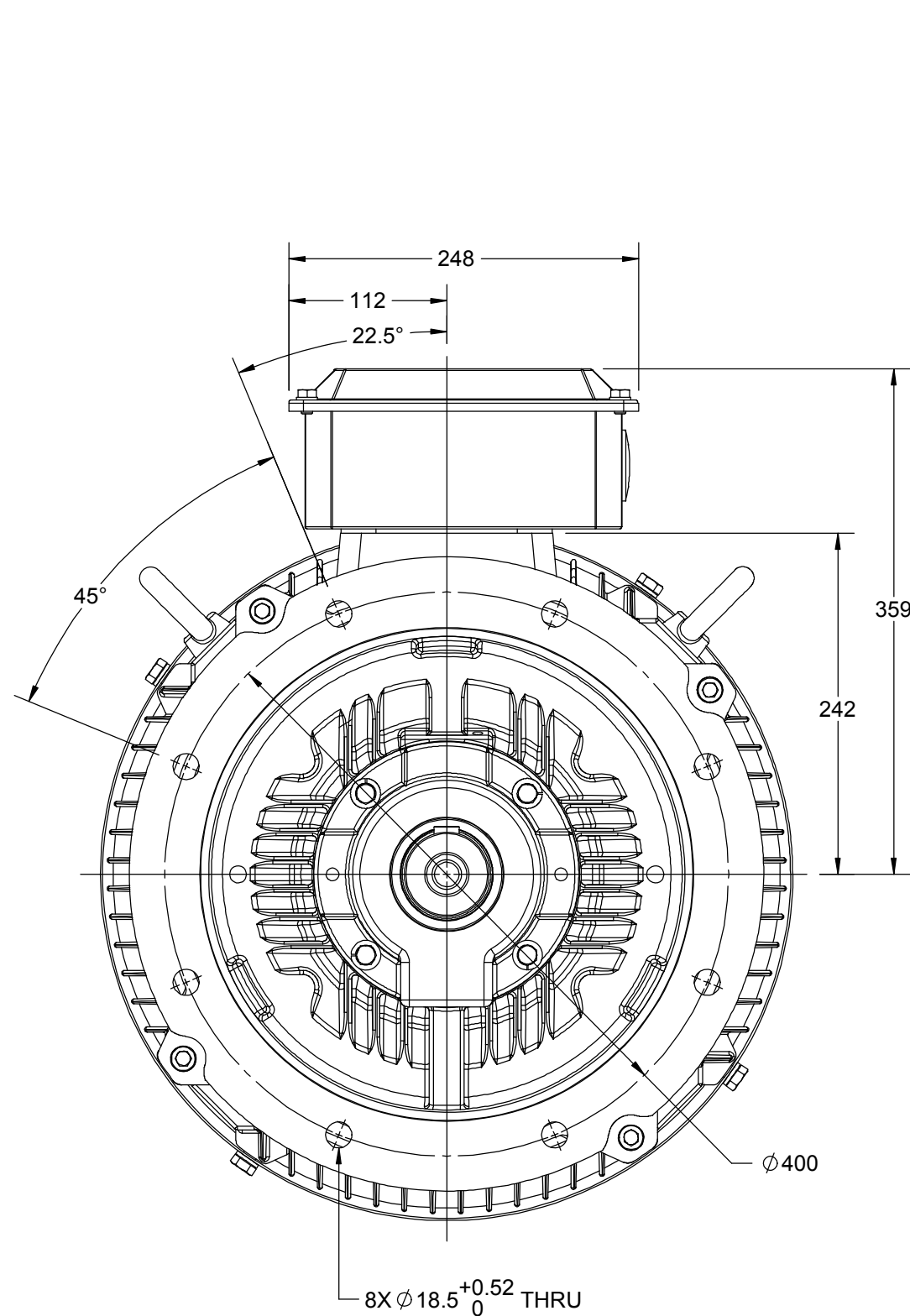
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DRAWING REVISION B	REVISION BY LK	DATE 28/06/2019
ECO ECO-0169536	APPROVED BY SR	DATE 28/06/2019
ECO DESCRIPTION MODEL UPDATED AS PER NEW 3D STRUCTURE		
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DRAWN BY PRIYA	<b>marathon™</b> Motors		
DATE 05/04/2018			
APPROVED BY JAY	DESCRIPTION <b>OUTLINE</b>		
DATE 05/04/2018	<b>225S-FR-4~8P-B5 MTG MOTOR TYPE: SCA</b>		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER <b>0222500897</b>	SHEET 1 OF 1

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DRAWING REVISION

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REVISION BY

SN

DATE

13/01/2017

ECO  
ECO-0116390

APPROVED BY  
SBD

DATE

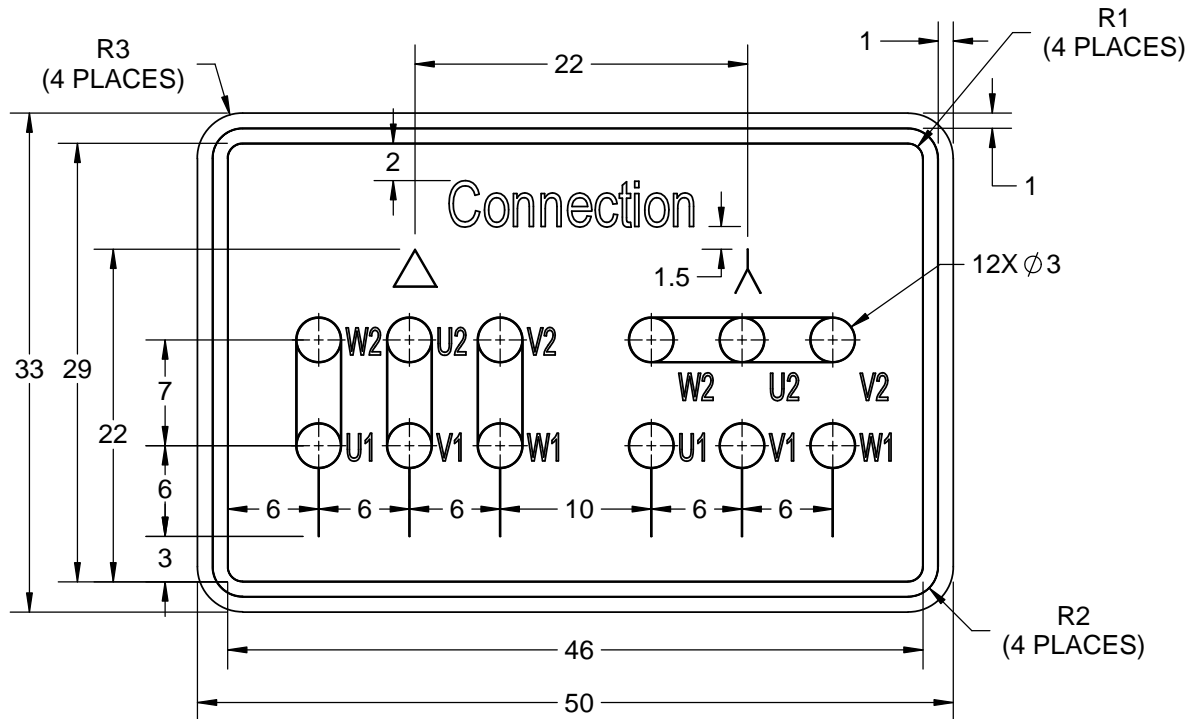
13/01/2017

ECO DESCRIPTION

NEW DRAWING RELEASE

GEOMETRIC TOLERANCE

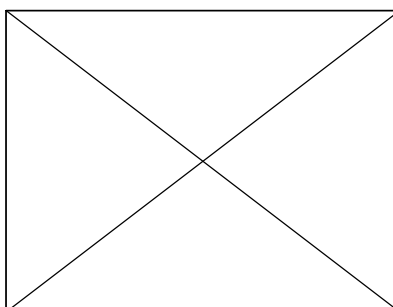
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



NOTES:

1. PRESSURE-SENSITIVE ADHESIVE COATED PAPER ON THE BACK OF SELF-ADHESIVE.
2. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS BLACK.
3. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.

8WD.442.2017



DRAWN BY  
SN  
DATE  
16/12/2016  
APPROVED BY  
SBD  
DATE  
16/12/2016  
REFERENCE  
THIRD ANGLE  
PROJECTION

REGAL<sup>TM</sup> Regal Beloit America, Inc.  
DESCRIPTION  
CONN DIAGRAM-NAMEPLATE  
MATERIAL  
PROCESS/FINISH  
SIZE  
A  
DRAWING NUMBER  
8442000085  
SHEET  
1 OF 1

**Model No.** SCA0372A3121GAAD01

U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load				PF at __ load			I <sub>A</sub> /I <sub>N</sub> [pu]	T <sub>A</sub> /T <sub>N</sub> [pu]	T <sub>K</sub> /T <sub>N</sub> [pu]
									5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
415	Δ	50	37	50	64.4	1479	241.02	IE2	-	92.7	92.7	93.7	0.86	0.83	0.74	6.2	2.3	2.9

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	225S	Motor weight - approx.	365 kg
Duty	S1	Gross weight - approx.	395 kg
Voltage variation *	± 10%	Motor inertia	0.5292 kgm <sup>2</sup>
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.2 mm/s
Design	N	Noise level ( 1meter distance from motor)	76 dB(A)
Service factor	1.0	No. of starts hot/cold/Equally spread	2/3/4
Insulation class	F	Starting method	DOL
Ambient temperature	-20 to +50 °C	Type of coupling	Direct
Temperature rise (by resistance)	70 [ Class B ] K	LR withstand time (hot/cold)	15/30 s
Altitude above sea level	1000 meter	Direction of rotation	Bi-directional
Hazardous area classification	NA	Standard rotation	Clockwise form DE
Zone classification	NA	Paint shade	RAL 5014
Gas group	NA	Accessories	
Temperature class	NA	Accessory - 1	
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball	Accessory - 3	-
DE / NDE bearing	6313 C3 / 6213 C3	Terminal box position	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 50mm <sup>2</sup> /2 x M40 x 1.5
Type of grease	Shell Gadus S5 V100 or Equivalent	Auxiliary terminal box	NA

I<sub>A</sub>/I<sub>N</sub> - Locked Rotor Current / Rated Current

T<sub>K</sub>/T<sub>N</sub> - Breakdown Torque / Rated Torque

T<sub>A</sub>/T<sub>N</sub> - Locked Rotor Torque / Rated Torque

**NOTE**

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

\* Voltage, Frequency and combine variation are as per IEC60034-1

Technical data are subject to change. There may be discrepancies between calculated and name plate values.

Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	-	IS 12615 : 2018	-	-	-

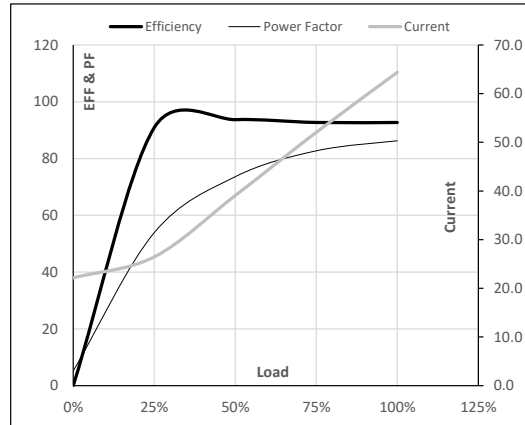
Model No. SCA0372A3121GAAD01

Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	415	Δ	50	37	50.0	64.4	1479	24.58	241.02	IE2	50	S1	1000	0.5292	365.0

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	22.2	26.5	39.1	52.1	64.4	
Torque	Nm	0.0	59.5	119.5	179.9	241.0	
Speed	r/min	1500	1495	1490	1485	1479	
Efficiency	%	0.0	90.9	93.7	92.7	92.7	
Power Factor	%	5.2	53.9	73.6	82.7	86.3	

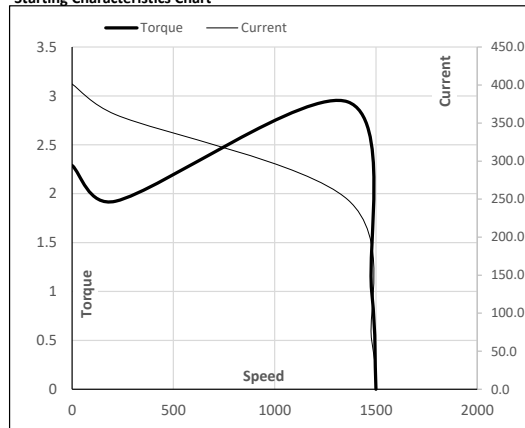
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	214	1361	1479	1500
Current	A	401.3	361.2	249.3	64.4	22.2
Torque	pu	2.3	1.9	2.9	1	0

**Starting Characteristics Chart**



**NOTE** Refer data sheet for applicable standard and tolerances on performance parameters

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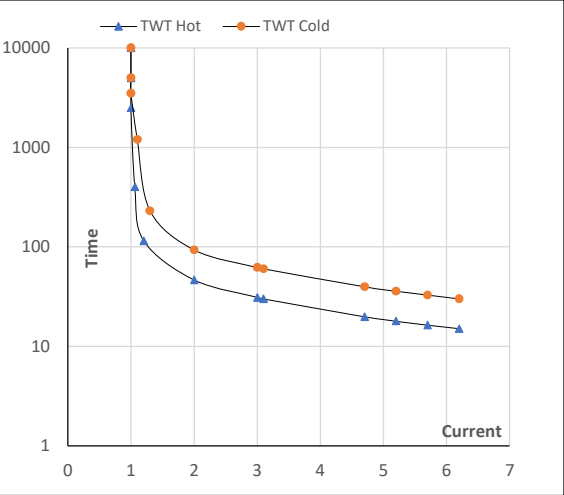
Model No. SCA0372A3121GAAD01

Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg·m <sup>2</sup> ]	Weight [kg]
TEFC	415	Δ	50	37	50	64.4	1479	24.58	241.02	IE2	50	S1	1000	0.5292	365

Motor Speed Torque Data

Load		FL	I <sub>1</sub>	I <sub>2</sub>	I <sub>3</sub>	I <sub>4</sub>	I <sub>5</sub>	LR
TWT Hot	s	10000	47	31	25	19	17	15
TWT Cold	s	10000	93	62	50	37	34	30
Current	pu	1	2	3	4	5	5.5	6.2

Thermal Characteristics Chart



NOTE Refer data sheet for applicable standard and tolerances on performance parameters

Issued By

Issued Date



## EC Declaration of Conformity

The undersigned representing  
the manufacturer:

Regal Beloit America  
100 East Randolph St.  
Wausau, WI 54401

and the authorized representative  
established within the Community:

Marathon Electric UK  
6F Thistleton Road Ind. Estate  
Market Overton  
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : SCA0372A3121GAAD01

(Model No. may contain prefix and/or suffix characters)

Catalog No : SCA0372A3121GAAD01

Rework No : N/A

### Directives :

Low Voltage Directive 2014/35/EU

### Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)

EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

### Authorized Representative:



Michael A. Logsdon  
Vice President, Technology

### Authorized Representative in the Community:



Julian Clark  
Marketing Engineer

Created on 09/01/2022

**CE 22**